

SECTION 8

SAFETY

SAFETY OFFICER

The Safety Officer, a member of the command staff, is responsible for monitoring and assessing hazardous and unsafe situations and developing measures for assuring personnel safety. The Safety Officer will correct unsafe acts or conditions through the regular line of authority, although they may exercise emergency authority to stop or prevent unsafe acts when immediate action is required.

- Obtain briefing and operating procedures from the Incident Commander
- Establish systems to monitor fire activities for hazards and risks. Take appropriate preventative action
- Priority of recommendations will start with risks having the highest potential for death or serious injury and follow through to those of a lesser degree
- **DIRECT INTERVENTION SHOULD BE USED TO IMMEDIATELY CORRECT A DANGEROUS SITUATION. DOCUMENT ALL INTERVENTIONS**
- Evaluate operating procedures. Update or modify procedures to meet the safety needs on the fire
- Participate in planning meeting
- Review Incident Action Plans
- Review and approve Medical Plan (ICS Form 206)
- Prepare the safety message included in the Incident Action Plan
- Analyze observations from staff and other personnel
- Place hazards and risks in priority for action
- Present safety briefing to overhead. Safety briefings should emphasize hazards and risks involved in action plan components
- Conduct investigations of accidents involving mobilized resources. Assist as needed with investigation documentation. Collect documents, including the OSFM “Civilian Casualty Report” and “Fire Service Casualty Report” forms if appropriate
- Prepare accident report upon request of the Incident Commander
- Prepare final safety report upon request of the Incident Commander
- Maintain Unit Log (ICS Form 214)

GENERAL RESPONSIBILITIES

Firefighter and public safety is the first priority of fire management.

Personal actions describe safety more effectively than written plans or rule books. Firefighters' actions tell what they consider important. Supervisors shall maintain accountability of assigned personnel as to exact location, personal safety, and general welfare at all times, especially when working in and around incident operations.

SUPERVISION OF FIREFIGHTERS' WORK INCLUDES:

- Setting a personal example of safe behavior and enforcing established safe practices and procedures
- Evaluating firefighters' physical and mental condition
- Analyzing work situations to eliminate or avoid hazards. Discussing safety at the beginning of each new work assignment
- Becoming immediately involved whenever injury occurs by ensuring that medical treatment is provided in a timely manner and investigating the accident with persons involved
- Monitoring work to be sure it is done safely and efficiently
- Providing leadership in taking corrective action aimed at eliminating causes of accidents and instilling a safe work attitude
- Providing clear instructions and ensuring instructions are understood. Those instructions must be followed at all times, but if you feel unsafe or unsure those instructions should be questioned for clarification
- Protecting employees from reprisal for reporting unsafe conditions

SOF'S RESPONSIBILITIES IN PREPARING FOR PLANNING MEETING

SAFETY OFFICER

1. Coordinate with FBAN on fire potential and identify any areas that pose unusual threats to people
2. Coordinate with OSC on current suppression actions and potential safety problems
3. Monitor coordination/communication within the command and general staff. Listen for "red flags": fatigue; radios
4. Prepare form 215a

SAFETY BRIEFING

Incident Commanders, supervisors and firefighters must ensure that safety factors are covered with incident personnel at all operational briefings and that safety briefings occur throughout the fire organization.

Safety factors should include the following:

- Define assignment
- Identify the hazards
- Apply Standard Fire Orders, Watchout Situations, LCES
- Identify avoidance and mitigation measures to reduce risk
- Continue to analyze situation and make needed adjustments
- Address basic firefighter safety and health issues
- Communicate

BRIEFING PROCEDURE

All Task Force resources shall be briefed prior to deployment. The following checklist will be used to brief all mobilized resources. Engine crews can be briefed by radio if driving to the camp for the briefing would cause needless delay in attacking the fire. Document all briefings.

EXPANDED BRIEFINGS

The attached briefing checklist contains the minimum required briefing items. Units are encouraged to expand the minimum briefing as appropriate to ensure that safety, effectiveness and efficiency are adequately managed.

BRIEFING ITEMS

Some items on the briefing checklist may not be applicable. For example, a discussion of the conditions of 1,000-hour time lag fuels may not be necessary if such fuels do not exist in or adjacent to the incident site. A brief description of items on the briefing checklist follows.

1. Incident statistics: Provide the location, (T, R, Section), estimated size, jurisdictional agency, known hazards such as power lines, HazMat sites, loose rock, etc.
2. Incident Site: Provide basic information about the site, including biome, (forest, woodland, shrub-steppe, etc.). Include general state of health, such as over mature, 70 percent insect infested, large areas of blowdown, flashy fuels, etc. Also, provide general sense of terrain, such as large relief with 60 percent slopes.

3. Fuel Conditions: Provide best estimate of live, 1-, 10-, and 1,000-hour time lag fuel moisture contents and important indices from NFDRS (National Fire Danger Rating System).
4. Weather Conditions: Provide current, (or most recent), weather forecast, and spot weather information if available. Emphasize FIRE WEATHER WATCHES and RED FLAG WARNINGS. Local dispatch should also remind the Incident Commander to obtain and relay site weather conditions.
5. Command and Control: Provide the name and contact radio frequency of the Incident Commander, (or appropriate general staff), for contact on arrival. Also describe the appropriate method of reporting, (checking in), the general communications procedure and key radio frequencies.
6. Fire Behavior: Provide best estimates of rate of forward speed, direction of spread and approximate flame lengths. Include important facts on recent fire behavior.
7. Aviation: Provide important information such as number and types of aircraft operation in the area, MOAs, airspace closure, etc.
8. Add additional information that would improve effectiveness and safety.
9. The IC should provide a specific safety briefing to all crews arriving at the incident.

BRIEFING CHECKLIST

1. **INCIDENT STATISTICS:**

Location _____
Size _____
Jurisdiction _____
Hazards _____

2. **INCIDENT SITE:**

Forest, Grassland, etc. _____
General Health _____
Terrain _____

3. **FUEL CONDITIONS:**

Live Fuels _____
1-hr Fuels _____
10-hr Fuels _____
1,000-hr Fuels _____
Important Indices _____

4. **WEATHER CONDITIONS:** (WS, direction, AT, RH)

Current Weather _____

Forecast Weather _____

5. **COMMAND/CONTROL:** _____

Incident Commander _____
Communications _____
Reporting Procedure _____
Key Radio Frequencies _____

6. **FIRE BEHAVIOR**

Spread Rate _____
Spread Direction _____
Flame Lengths _____

7. **AVIATION**

Aircraft _____
Hazards _____
Restrictions _____

8. **OTHER**

CLOTHING AND PERSONAL PROTECTIVE EQUIPMENT (PPE)

- Wear hard hat while on the fireline
- Wear 8" laced leather boots with slip-resistant soles
- Wear flame-resistant clothing while on the fireline and when flying in helicopters. Do not wear clothing, even undergarments, made of synthetic materials which can burn and melt on your skin. Roll down sleeves to the wrist
- Use leather gloves to protect hands
- Use eye protection whenever there is a danger of material being thrown back in your face
- Fire shelters will be carried when on the fireline
- Use hearing protection when working with high noise-level firefighting equipment such as helicopters, air tankers, chainsaws, pumps, etc.
- When operating chainsaws operators shall wear chaps, gloves, a hard hat, and eye and ear protection

FOOT TRAVEL

- Carry firefighting tools safely - down at your side and on the downhill side; never on your shoulder except for properly guarded power saws
- Going to and from the fireline, keep at least 10 feet apart and walk single-file
- Walk; do not run

LCES CHECKLIST

In the wildland fire environment, Lookouts, Communications, Escape Routes, Safety Zones (LCES) is key to safe procedures for firefighters. The elements of LCES form a safety system used by firefighters to protect themselves. This system is put in place before fighting the fire. Select a lookout or lookouts, set up a communication system, choose escape routes, and select a safety zone or zones.

LCES is a self-triggering mechanism. Lookouts assess and reassess the fire environment and communicate threats to the safety of firefighters. Firefighters use escape routes to move to safety zones.

LCES is built on two basic guidelines: 1) Before safety is threatened, each firefighter must be informed how the LCES system will be used. 2) The LCES system must be continuously re-evaluated as conditions change.

Lookouts

- Experienced/Competent/Trusted
- Enough lookouts at good vantage points
- Knowledge of crew locations
- Knowledge of escape and safety locations
- Map/Weather kit/Watch/IAP

Communications

- Radio frequencies confirmed
- Backup and check-ins established
- Update on any situation change
- Sound alarm early; not late

Escape Routes

- More than one escape route
- Scouted: soils/rocks/slope/vegetation
- Timed: slowest person/fatigue and temp factors
- Marked: flagged for day or night

Safety Zones

- Survivable without a fire shelter
- Natural: clean burn/rock areas/water
- Man-made: constructed sites/clear cuts/roads
- Vehicles for escape
- Scouted for size and hazards
- Close enough considering escape time
- Located to avoid hazardous terrain features
- Upslope = more heat impact = larger safety zone
- Downwind = more heat impact = larger safety zone
- Heavy fuels = more heat impact = larger safety zone

FIREFIGHTER REHABILITATION

Areas designed for resting, feeding and sleeping should be located in a safe, shady area away from smoke, noise, running fire, falling trees and snags, rolling rocks, moving vehicles, aircraft, and pack stock. Provide reasonable rest periods, especially at high elevations and on hot days.

Some reserve strength should be kept for emergencies. A lookout should be posted when a crew is resting near a fireline.

NIGHT OPERATIONAL PERIODS

Every effort should be made to orient work crews scheduled for night operations during daylight hours and provided adequate lights and communication. A knowledgeable day operations representative should remain on site to properly orient and brief night operations crews.

FIRE BEHAVIOR

Initiate all actions based on current and expected fire behavior.

EXTREME FIRE BEHAVIOR

- Be alert to indicators of extreme fire behavior:
 - Trees crowning inside fireline
 - Smoldering fires beginning to burn actively
 - Approaching thunderheads with dark clouds beneath
 - Presence of dust devils and whirlwinds
 - Increased spotting
 - Sudden calm
 - High clouds moving fast in direction different from surface wind

FIRE WEATHER FORECAST

Forecasts reflecting general weather changes as well as local weather affecting the immediate fire area should be studied, understood and used by overhead on the fire. NOAA Weather Radio forecasts should not be substituted for fire weather forecasts. NOAA Weather Radio does not broadcast fire weather forecasts; only forecasts directed to the general public.

Spot weather forecasts should be requested for fires that have potential for extreme fire behavior, exceed initial attack or are located in areas for which a Fire Weather Watch or Red Flag Warning has been issued.

Fire Weather Watch: a possible critical fire weather pattern, i.e. strong wind; dry lightning; dry cold front; low relative humidity.

Red Flag Warning: term used by fire weather forecasters to alert firefighters/managers to an ongoing or imminent critical fire weather pattern i.e., strong wind; dry lightning; dry cold front; low relative humidity.

FIRE DANGER RATING

Request information on locally accepted National Fire Danger Rating Indices and components. Find out what this season's trends are compared to the historic average and historic maximums. Find out what the value of the index/component means locally.

LINE SCOUTING

- When scouting or working ahead of a crew in brushy terrain, carry a cutting tool and clear any vegetation that might hamper escape
- A lookout should be posted to warn of danger when personnel are scouting in unburned areas of dense vegetation

SAFETY FLAGGING STANDARDS

- Yellow-black striped ribbon denotes hazards.
 - ✓ Remove the yellow-black striped ribbon when the hazard is abated. If feasible, write on the ribbon the nature of the hazard; i.e., "snags - 200 feet up slope."
- Lime green denotes safety zones and escape routes.

Note: Firefighters should check with state and agency policy to verify flagging standards.

FIRING EQUIPMENT

- Firing equipment shall be used only by trained personnel
- Use only approved equipment and qualified personnel when firing from helicopters
- Use no more than one part gasoline to three parts diesel, (or heavier fuel), in flame-thrower or drip torches. Observe manufacturers' recommendations
- When operating ground-based firing equipment that utilizes jellied gasoline: to avoid back splatter do not direct the stream of burning material into the tops of nearby trees or trail brush
- Properly ground firing equipment when fueling
- Maintain constant radio communications between the firing operation and other appropriate fireline personnel

POWER SAWS

- Stop motor when carrying, making adjustments, repairing, or cleaning a chainsaw
- Use blade guards when carrying saws in rough country
- Cool motor before refueling. Fill on bare ground and move a safe distance from fueling area before starting
- Use proper safety equipment such as chaps, gloves, hard hat, and eye and ear protection

ENGINE OPERATIONS

- All vehicles going to fires should stop for traffic lights and stop signs, even when using emergency warning lights, sirens and air horns. Watch for oncoming traffic
- Mark vehicles parked on highway at fires with flags or warning lights in front and back to warn motorists of presence of equipment and personnel
- An engine operator, a hose puller and a nozzle operator are desirable for effective use of engines in performing fire suppression operations

- Park engines on the side of road away from oncoming fire to reduce heat exposure on equipment and to allow other vehicles to pass. Do not block the road with your engine
- Engine will be positioned for a quick get-away
- Engines should be attended at all times
- Nozzle operators should wear eye protection
- When fires make hot runs upslope, it is safer to draw back to the flanks and let the fire cross the road than to attempt a frontal assault
- Adequate supervision and good communications, including hand signals, are necessary for safe, effective engine work

PERSONNEL TRANSPORTATION

- All passengers in vehicles shall be seated and seat-belted with arms and legs inside vehicle
- Personnel and unsecured tools will not be transported together
- Driver must be qualified for the vehicle and operating conditions. If not, remove them from driving duties
- When traveling to a fire observe all traffic signals, safe speed limits and safety rules
- Driver should walk around vehicle to make sure all is clear before departure
- Driver is responsible for arrangements to ensure that if chock blocks are provided, they are in place before loading, unloading or when parked
- When transporting personnel, the driver shall not leave his seat until the vehicle is securely chocked. NEVER load or unload personnel from an UNCHOCKED VEHICLE
- Driver should conduct daily mechanical check of vehicle before driving. Unsafe equipment should be removed from service and reported to the Logistics/Ground Support Unit for repair
- Driver should use spotter outside of vehicle when backing or turning around
- It is recommend that vehicles be operated with headlights on at all times

POWER LINE HAZARDS

If possible, the power company should deactivate lines in the fire area that may endanger firefighters. All personnel should be cautioned against directing water streams or aerial retardant into high-tension lines. They should also be made aware that the smoke may become charged and conduct the electrical current. Deactivated transmission and distribution lines may continue to pose a hazard due to induction.

- Identify, map and discuss at briefings all electrical lines on the incident
- When around power lines:

- ✓ If a power line falls on your vehicle, DON'T leave vehicle until the power company arrives. If the vehicle is on fire or fire is near, jump clear; DON'T hang on; keep feet together and bunny hop away
- ✓ Minimize operation of heavy equipment under power lines
- ✓ DON'T drive under power lines with long antennas
- ✓ DON'T fuel vehicles under power lines
- ✓ DON'T stand near power lines during retardant drops
- ✓ DON'T go near or move downed power lines
- ✓ DON'T direct fire retardant or water on power lines
- ✓ DON'T stand or work in dense smoke near power lines

THUNDERSTORM SAFETY

The mature stage of a storm may be marked on the ground by a sudden reversal of wind direction, a noticeable rise in wind speed and a sharp drop in temperature. Heavy rain, hail and lightning occur only in the mature stage of a thunderstorm. During a storm:

- Stay out of dry creek beds
- Do not use radios or telephones
- Put down all tools and remove caulk boots
- Sit or lie down in open country
- Avoid grouping together
- Do not handle flammable materials in open containers
- Stay in your vehicle. Take shelter in vehicles if possible
- Turn off machinery; electric motors
- When there is no shelter, avoid high objects such as lone trees. If only isolated trees are nearby, the best protection is to crouch in the open; keep a distance of twice the height of the tree away. Keep away from wire fences, telephone lines and electrically conductive elevated objects
- Avoid ridge tops; hilltops; wide-open spaces; ledges; rock outcroppings; exposed shelters
- Advise crew that if they feel an electrical charge - if their hair stands on end or their skin tingles - lightning may be about to strike. Drop to the ground immediately

SAFETY WHILE PROTECTING STRUCTURES FROM WILDLAND FIRES

Structures exposed to wildland fire in the urban interface can and should be considered as another fuel type. Size-up and tactics should be based upon fuels, weather and topography just as those criteria would be applied to a wildland fire.

- Be aware of possible toxic fumes and stay upwind and out of the smoke

- Wear full protective clothing
- Do not wet down ahead of fire - conserve your water supply
- Keep at least 100 Gal. of water reserve in your engine tank
- Have a protector line for your crew and engine
- Back your engine in; you may need to leave quickly
- Use 1 ½ inch lines if possible
- Do not lay long hose lays as it cuts mobility and may burn up a lot of hose
- Use foam to coat the structure, if availability and time permits
- DO NOT park under power lines, next to propane tanks, in saddles, or in chimneys
- DO NOT enter a burning structure unless you have been properly trained and equipped for that sort of activity

The safety hazards that exist in a typical protection of structures from wildland fire assignment are significant. In addition to applying the Standard Fire Orders and avoiding the Watchout Situations, good judgment and planning are extremely important because of the presence of homeowners and their families, the media, pets and livestock, traffic, and unfamiliar combustibles. LCES - Lookouts, Communications, Escape Routes, Safety Zones.

STRUCTURAL "WATCHOUT" SITUATIONS

- Electrical lines
- Wooden construction, shake roofs, overhanging eaves, porches and decks, and large windows
- Poor access; narrow one-way roads
- Inadequate water supply
- Natural fuels 30 feet or closer to structure
- Extreme fire behavior
- Strong winds of 25 mph or more
- Evacuation of residents necessary
- Structures located in chimneys, box or narrow canyons, on slopes of 30% or more, and in continuous, flashy fuel types
- Propane tanks and other fuel storage

MANAGING VEHICLE TRAFFIC IN SEVERE SMOKE

Smoke has the potential to cause severe safety hazards to vehicle traffic in the vicinity of active fires, especially at night. The following traffic-related items should be considered and addressed in local unit planning documents prior to an incident.

- Identification of roads open to the public that may be impacted by smoke which are important to the local traffic system
- Identification of adequate equipment and trained personnel to control traffic. This may include warning signs, communications equipment, (preferably not on the active fire frequency), and vehicles equipped with flashing warning lights
- Development of an emergency medical evacuation contingency plan including identification, location and phone numbers of local hospitals and rescue units
- Identification, location and phone numbers of local units that have law enforcement and traffic control responsibilities in the smoke impacted area. Review any local agreements with these agencies presently in force
- Identification and phone numbers of radio and television stations that can issue traffic advisories for the smoke impacted area
- Identification of alternate traffic routes as part of Incident Traffic Plan
- Identification of traffic routes subject to temperature inversions as well as contributory factors such as fog and ice
- When potential smoke-related problems are identified:
 - ✓ Advise the Agency Administrator that severe smoke exists
 - ✓ Implement preplanned actions such as posting smoke warning signs

- ✓ Ensure proper equipment is ready and appropriate personnel are briefed on contingency plans and are available to control traffic
- ✓ Notify local law enforcement units of potential problem
- Establish periodic patrols to monitor smoke impacted areas. When smoke-related traffic problems occur, the first person on the scene must maintain traffic control until relieved. He or she should take immediate action to prevent injuries and damages by:
 - ✓ Establishing control points on both sides of the impacted area. A minimum of 1,500 feet on both sides of the impacted area should be used
 - ✓ Slowing or stopping traffic entering the area and advising drivers of alternate routes
 - ✓ Assigning a person to keep a log of what actions are taken
 - ✓ Ensuring warning signs are in place and any other preplanned actions have been implemented
 - ✓ Notifying personnel who have been identified and equipped to direct traffic and notify other local units that have responsibilities for traffic control
 - ✓ Implementing radio/television traffic advisories for the impacted area
- Smoke moving unexpectedly into an area may be an indication of changing burning conditions. All traffic should be excluded until this change can be evaluated.
- When smoke-related traffic accidents occur, fire personnel on the scene should:
 - ✓ Make all efforts to assist and protect people
 - ✓ Notify, if necessary, appropriate medical units and request assistance
 - ✓ Notify appropriate law enforcement units
 - ✓ Provide additional personnel for traffic control, if necessary
 - ✓ Notify agency administrator who may assign local safety and tort claims personnel to the scene
 - ✓ Assign an individual, (preferably a law enforcement official), to record facts about the accident including names, addresses and statements of witnesses, (if given willingly). At a minimum, record license plate identification on all vehicles in the vicinity of the accident. Coordinate efforts with local law enforcement personnel
 - ✓ Fire personnel at accident scene, if questioned by someone other than law enforcement officers, should only state that their involvement was in fire suppression activities in the vicinity
 - ✓ Involved personnel should, immediately after being released from the accident scene, submit written reports of their actions and observations

Safety is a matter of common sense. Use it and you will keep yourself and others out of trouble and get the job done safely.

REMEMBER: SAFETY IS NO ACCIDENT

FIREFIGHTER ENTRAPMENT

Entrapment: A situation where personnel are unexpectedly caught in a fire behavior-related, life-threatening position where planned escape routes or safety zones are absent, inadequate or compromised. An entrapment may or may not include deployment of a fire shelter for its intended purpose. These situations may or may not result in injury. They include "near misses."

Fire Shelter Deployment

Following the "Standard Fire Orders" and recognizing the "Watchout Situations" should prevent you from getting into a situation that requires a shelter deployment. When threatened by an unexpected change in fire behavior, follow proven escape procedures first before considering a fire shelter deployment.

When on the fireline, YOU MUST CARRY YOUR SHELTER WITH YOU AT ALL TIMES. It should not be stored in your pack. It should be in a location for quick access.

If you are a crew member, your supervisor will decide when and where to deploy shelters. When deciding to deploy shelters, supervisors must identify a safe area and provide adequate time for deployment to occur.

Choosing Deployment Area

- Natural firebreak; wide dozer line; low spots; stream bed; lee side of ridge top; uphill side of road; burned-over area. Low spots will have less heat and smoke exposure
- Avoid areas with heavy brush, trees with low-hanging branches, logs, snags, and flammable materials. Flammable materials include gasoline cans, supply boxes, packsacks, fuses, and other firefighting gear
- Keep away from narrow draws, chutes and chimneys as they tend to funnel smoke, flame and hot gas

Shelter Deployment

- Crew must stay together
- Clear an area 4 by 8 feet, (larger if time allows), down to bare mineral soil
- Keep a firm grip on shelter. Otherwise, you may lose it in the high winds generated by the approaching flame front
- Position shelter so your feet are toward the approaching flame front. The foot end will become the hottest spot while in shelter and it is easier to hold down using your feet
- Items to wear and take into the fire shelter:

Gloves Without gloves, it will be very difficult to hold onto the shelter while inside.

- Hard hat Provides head protection.
- Radio Supervisors should maintain communication with those outside the area of shelter deployment.
- Water Drink water so you continue to sweat, which aids bodily cooling. **NEVER** wet clothing as your clothes will rapidly conduct heat.

Leave hand tools outside shelter. Remove any hazardous items like gasoline and fuses, tossing them well away from deployment area.

Never plan to share a shelter unless someone is without one.

While Inside Shelter

- You must protect your airway and lungs from the fire's hot gasses. Keep your nose pressed to the ground as much as possible. Use a dry bandana to protect your airway. **NEVER USE A WET BANDANA**
- High winds should be expected as the flame front approaches and passes. It will take all your effort to hold down the shelter. Wear your gloves at all times while inside
- Your shelter may have pinholes or cracks along the folds. These pinholes do not reduce your protection. No matter how big a hole or tear, you are still better off inside the shelter
- Talk to each other. Remember, the noise can be deafening as the fire passes and you may not be able to hear anyone
- Do not move unless it's absolutely necessary. Move by crawling turtle fashion, keeping the shelter edges close to the ground

How Long to Stay Inside Shelter

Once you've committed yourself to the shelter, stay there no matter how hot it may get inside. It's much worse outside your shelter. **DO NOT PANIC!**

There is no fixed time to stay inside the shelter. Leaving a shelter too soon can expose lungs to superheated air or dense smoke.

A drop in noise, wind, heat, and change in color are indicators that it's safe to leave the shelter. Crew members should not leave their shelters until instructed to do so by their supervisor.

Building Refuge

- Seeking refuge in a building or structure is an option supervisors may want to consider for crew protection when a change in fire behavior prevents reaching an escape route or safety zone
- Advise immediate supervisor, (Strike Team Leader, Division/Group Supervisor, etc.), of the situation
- If time allows, remove combustible materials, (lawn furniture, wood piles, etc.), and vegetation away from structure and propane tank; shutting off gas
- Close windows and heavy drapes; take down light curtains. Secure exterior doors

- Bring into structure extinguishers and back pumps; charged hose line if available
- Fill all sinks, bathtubs and any available buckets with water, soaking towels, etc. to put out small fires and to place against exterior door jambs
- **KEEP AWAY** from windows and exterior doors as fire passes
- **STAY OUT** of basement and upper floors

Vehicle Refuge

If you find yourself in a fire entrapment situation where a shelter deployment is not possible, using a vehicle for refuge may be an option.

- Park vehicle in an area void of vegetation; fire out around vehicle if there is time. Park behind a natural barrier or structure
- DO NOT park on the downhill side of a road, under power lines or under overhanging vegetation. Stay out of saddles or draws
- Position vehicle in a direction which provides the area occupied by crew with maximum protection from approaching flame front
- Set parking brake; leave motor running at high RPM; keep vehicle lights on
- Roll up windows; DO NOT lock doors. Someone else may need to get in
- Cover windows with fire shelters with reflective materials placed against window
- YOU MUST PROTECT YOUR AIRWAY. Remain as low in vehicle as possible; use a dry bandana to cover your nose and mouth
- While inside vehicle, expect:
 - ✓ Temperatures may reach 200 degrees F
 - ✓ Smoke and sparks may enter the vehicle
 - ✓ Plastic parts may start to melt and give off toxic gases
 - ✓ Windows may start to crack
 - ✓ Exposed skin may receive radiant heat burns
- If the vehicle catches fire or windows blow out and you have to exit before the fire has passed:
 - ✓ Each crew member covers themselves with a fire shelter
 - ✓ Exit the vehicle from the side away from the greatest heat
 - ✓ Stay together and as low to the ground as possible; moving away from vehicle
- Deploy shelter in a safe area
- After fire passes, check for and treat injuries
- Inspect vehicle for fire; extinguish if possible

VEHICLE ACCIDENT CHECKLIST

1. Report on Conditions
 - a. Hazard (fuel, electrical, traffic, access, etc.)
 - b. Need for law enforcement; ambulance; helicopter; tow truck; extrication tools
 - c. Injuries (number of victims; severity)
 - d. Vehicles (number; type)
2. Establish traffic control. Be sure to have positive communications
3. Assess for hazard or potential. Take suppression action as needed if trained, equipped and authorized
4. Perform patient assessment and administer first aid or triage until responsible medical service arrives. If there are injuries/fatalities do not give names or other information over the radio that would reveal identity to listener. Do not move body
5. Take notes; document all events

Advise agency dispatcher of changes in incident status, e.g. arrival of other units, patient transport, available on scene, etc.

INJURY AND FATALITY REPORTING

Notify Incident Command and OSFM Agency Administrator IMMEDIATELY when an injury or fatality occurs. Refer to Emergency Plan, Section 12 in this guidebook.

- If a State of Oregon (OSFM) employee is injured, refer to the chart below
- If a mobilized resource is injured, follow the procedure established by the injured worker's employer

INCIDENT TYPE	NOTIFY	COMPLETE SAIF FORMS	DISTRIBUTE
Injury/Illness with No Doctor Visit	Supervisor	Form 22 Occupational Injury Report	Forms are confidential medical information
Injury/Illness with Doctor Visit	Supervisor	Form 22 Occupational Injury Report, and Form 801 Employers Report of Occupational Injury	Do NOT distribute
Injury/Illness with Hospitalization	Supervisor immediately OR-OSHA within 24 hours	Form 22 Occupational Injury Report, and Form 801 Employers Report of Occupational Injury	Submit to the OSP Safety Coordinator
Catastrophic Injury/Illness (2 or more fatalities; 3 or more hospitalizations)	Supervisor immediately OR-OSHA within 8 hrs	Form 22 Occupational Injury Report, and Form 801 Employers Report of Occupational Injury	
Fatality	Supervisor and OR-OSHA immediately	Form 22 Occupational Injury Report, and Form 801 Employers Report of Occupational Injury	

Phone Numbers

OSP Safety Officer (503) 378-3720 x. 4119

ODF Safety Officer (503) 945-7295

OR-OSHA:

Bend (541) 388-6066

Medford (541) 776-6030

Portland (503) 229-5910

Eugene (541) 686-7562

Pendleton (541) 276-9175

Salem (503) 378-3274

SAIF: 1-800-285-8525; After hours 1-800-346-4544

Injury/Fatality Procedures

Serious Injury

1. Give first aid - call for medical aid and transportation if needed.
2. Do not release victim's name except to authorities. NEVER BROADCAST VICTIM'S NAME ON AIR.
3. Do not allow unauthorized picture taking or release of pictures.
4. Notify Incident Commander, who will:
 - a. Assign a person to supervise evacuation, if necessary, and stay with the victim until under medical care. In rough terrain, at least 15 workers will be required to carry a stretcher.
 - b. Assign person to get facts and witness statements and preserve evidence until investigation can be taken over by the Safety Officer or appointed investigating team.
 - c. Notify the Agency Administrator.

Fatality

1. Do not move the body unless it is in a location where it could be burned or otherwise destroyed. Secure accident scene.
2. Do not release victim's name except to authorities.
3. NEVER BROADCAST VICTIM'S NAME ON AIR. Do not allow unauthorized picture taking or release of pictures.
4. Notify Incident Commander, who will:
 - a. Assign a person to start investigation until relieved by appointed investigating team.
 - b. Notify Agency Administrator and report essential facts. The Agency Administrator will notify proper authorities and next of kin as prescribed by agency regulations.
 - c. If requested, assist in transporting remains. Mark location of body on ground. Note location of tools, equipment or personal gear.

FIRST AID

Prompt first aid must be given for all injuries. First aid facilities should be made available in proximity to the fireline and at incident base and camp(s). When activated, the Medical Unit is responsible for all medical emergencies involving assigned incident personnel. Each crew should carry a first aid kit and all supervisory personnel should be trained in basic emergency first aid. While help is on the way, be prepared to move the patient in case of unexpected fire movement.

HEAT STRESS RECOGNITION

Heat stress disorders are divided into four categories. They are:

Heat Cramps - May be caused by lack of fitness or failure to replace salt lost in sweating.

Symptoms are painful muscle cramps

Treat by resting and drinking lightly salted water or lemonade, tomato juice or athletic drinks

Heat Exhaustion - Caused by failure to replace water.

Symptoms are weakness, unstable gait or extreme fatigue; wet, clammy skin; headache; nausea; collapse

Treat by drinking fluids and rest in a shaded area

Dehydration Exhaustion - Caused by failure to replace water losses over several days.

Symptoms are weight loss and excessive fatigue

Treat by increasing fluid intake and providing rest until body weight is restored

Heat Stroke - Caused by total collapse of the body's temperature regulating mechanisms. REQUEST EMERGENCY MEDICAL ASSISTANCE AT ONCE AS HEAT STROKE IS A LIFE THREATENING MEDICAL EMERGENCY. BRAIN DAMAGE OR DEATH CAN RESULT IF TREATMENT IS DELAYED.

Symptoms are hot, often dry skin; high body temperature, (106° F or higher); mental confusion; delirium; loss of consciousness; convulsions

Treat by cooling the victim immediately, either by immersing in cold water or soaking clothing with cold water and fanning to promote cooling. Continue until temperature drops below 102° F

Treat for shock once temperature is lowered

(Added March 2010)

The Oregon State Fire Marshal and the Oregon State Fire Marshal Incident Management Teams recognize and acknowledge the need to manage stress, fatigue and environmental impacts on those assigned to an Oregon State Fire Marshal incident.

Following guidance from the National Wildfire Coordinating Group and from NFPA 1584, Incident Commanders will ensure that incident strategies and objectives account for the need of managing human resources to maximize their physical and mental fitness/safety over the course of an incident. Strategic considerations are:

- Design, implement and enforce a 2:1 work/rest ratio
- Design, implement and enforce a Rehabilitation Plan addressing environmental conditions and the dynamics of the operational periods
- Ensure that demobilization recognizes and addresses stress/fatigue issues and need for adequate rest prior to release

Operational Assignments—Work/Rest

The recognized operational period is typically 12 hours. However, the initial attack operational period may be extended to 18 hours to account for situations that require immediate action to mitigate hazards to life or property. When there is an extreme hazard to life, this initial attack period may be extended to 24 hours.

Once the 24 hour initial attack period has expired, a 2:1 work/rest plan will be implemented.

It is of paramount importance that Incident Commanders recognize these extensions and plan accordingly.

Any proposed extension of resources exceeding the 2:1 work/rest ratio must be **documented and approved by command.**